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THE AGRICULTURAL EXPERIMENT STATION
INSTITUTE OF AGRICULTURE
AND NATURAL RESOURCES
UNIVERSITY OF NEBRASKA-LINCOLN
ROY G. ARNOLD, DIRECTOR

Agricultural Experiment Station



OCT 17 1980

Vol. 14, No. 4, October 1980

Experiment Station FROM THE DIRECTOR'S DESK

The next meeting of the Experiment Station Advisory Committee will be November 7, 1980. Current members of the Advisory Committee are:

Jerry Bodman, Department of Agricultural Engineering (Secretary)
Donald Ferguson, Department of Veterinary Science (Chairman)
Eric Kerr, Panhandle Station
Ralph Neild, Department of Horticulture
R. A. Olson, Department of Agronomy
Leroy Peters, South Central Station
Lowell Satterlee, Department of Food Science and Technology
Ray Supalla, Department of Agricultural Economics
John Ward, Department of Animal Science

Please forward to them suggested topics, issues or concerns you would like to have considered by the committee.

Experiment Station Project Reviews

Advisory Committee Chairman, Don Ferguson, has appointed a subcommittee, consisting of Lowell Satterlee, Raymond Supalla, and John Ward, to evaluate the present project review system used by the Nebraska Agricultural Experiment Station. Input from Station scientists would be useful. Please send your comments and suggestions concerning project reviews to any member of the subcommittee.

Widaman Trust Distinguished Graduate Assistant Awards

Seven graduate students were selected to receive Widaman Trust Distinguished Graduate Assistant awards for the current academic year. The awards consist of \$1,000 stipends supplementary to any assistantship or other financial support the student may be receiving. The recipients will be honored at a luncheon on November 24. Recipients are:

Michael Russelle, Department of Agronomy
Jeffrey Pedersen, Department of Agronomy
Mike Tess, Department of Animal Science
Rich Stock, Department of Animal Science
Joan Rejda, Department of Agricultural Biochemistry
Leonard Saari, Department of Agricultural Biochemistry
Geraldine Russo, Department of Plant Pathology

These awards, funded by income from the Widaman Trust, are presented to outstanding IANR graduate students based on their academic records and research accomplishments in basic or fundamental research. Nominations for 1981-82 awards will be requested from departmental graduate committees next spring.

Comprehensive Reviews

The Comprehensive Review of statewide Animal Science research, extension, and teaching programs was completed during the week of October 6-10. Considerable staff time and effort were involved in preparing an extensive self study and reporting of their programs. In my judgement, there is considerable value in periodically assessing the progress of our programs, considering possibilities for future directions, and receiving input from external reviewers relative to our planning, policies and procedures. IANR administrators are committed to the process of periodic comprehensive program reviews. Reviews will occur at approximately five year intervals, and will include statewide research, extension and teaching activities of a given academic unit. Reviews involving Station scientists will be scheduled through Cooperative Research (CR), Science and Education Administration (SEA), USDA, and will involve an external review panel chaired by a CR/SEA official.

Roy G. Arnold

Sahs say:

The pesticide storage building is nearing completion in the Agronomy area.

The Animal Science Department Review Team and members of the department spent Wednesday afternoon and evening, October 8, at the Field Laboratory.

Contrary to my earlier statements, our "early morning" employees indicated that the pheasant count is considerably below average this season. Designated portions of the Field Laboratory will be open for pheasant hunting November 1, 1980.

Grants and Contracts

| | |
|--|---------|
| Arnold, Roy G. - Director's Office - USDA-SEA-AR | 620,606 |
| Ball, Ellen M. - Plant Pathology - Potato Association of America | 5,000 |
| Burnside, Orvin C. - Agronomy - Boots Hercules AgroChemicals, Co. | 2,000 |
| Burnside, Orvin C. - Agronomy - Rohm & Haas Company | 1,000 |
| Ferguson, Donald L. - Vet Science - Merck & Company, Inc. | 5,000 |
| Fischbach, Paul E. - Ag Engineering and Martin, C. W. - Engineering Mechanics - USDA-SEA | 79,690 |
| Gardner, Charles O. - Agronomy - Pioneer Hi-Bred International, Inc. | 7,000 |
| Gold, Roger E. - Environmental Programs - EPA - Region VII | 24,300 |
| Gold, Roger E. - Environmental Programs - EPA - Region VII | 13,500 |
| Hagen, Arthur F. - Panhandle Station - FMC Corporation | 750 |
| Hanna, Milford - Ag Engineering - John Deere Harvester | 5,000 |
| Haskins, Francis A. - Agronomy - Anna H. Elliott Fund (UN Foundation) | 6,500 |
| Hergert, Gary W. - North Platte Station - Georgia-Pacific Corporation | 467 |
| Kerr, Eric D. - Panhandle Station - Union Carbide | 3,700 |
| Kerr, Eric D. - Panhandle Station - FMC Corporation | 500 |
| Mandigo, Roger W. - Animal Science - Nebraska and Omaha Food Retailers Ass'n | 200 |
| Mayo, Z. B. - Entomology - American Cyanamid Company | 2,000 |
| Omtvedt, Irvin T. - Animal Science - American Society of Animal Science | 500 |
| Rhodes, Marvin B. - Veterinary Science - Dellen Laboratories, Inc. | 135 |
| Roeth, Fred W. - South Central Station - Boots Hercules AgroChemicals, Co. | 500 |
| Roeth, Fred W. - South Central Station - American Cyanamid Company | 1,000 |
| Rush, Ivan G. - Panhandle Station - Eli Lilly and Company | 4,500 |
| Shearman, Robert C. - Horticulture - OMC Lincoln | 125 |
| Specht, James E. and Williams, James H. - Agronomy - Union Pacific Foundation | 6,100 |
| Supalla, Raymond J. - Ag Economics - Union Pacific Foundation | 7,910 |
| Wicks, Gail A. - North Platte Station - American Cyanamid Company | 500 |
| Wilson, Robert G. - Panhandle Station - American Cyanamid Company | 600 |
| Wilson, Robert G. - Panhandle Station - Boots Hercules AgroChemicals, Inc. | 500 |
| Wilson, Robert G. - Panhandle Station - PPG Industries, Inc. | 2,000 |
| Wilson, Robert G. and Kerr, Eric - Panhandle Station - U. S. EPA | 36,100 |

NEBRASKA AGRICULTURAL EXPERIMENT STATION PUBLICATIONS - September 1980

Journal Articles - Submitted for Publication (contact authors for more information)

5926. *In vitro* Translation of Bacteriophage Ø6 RNAs+. Diane A. Cuppels, James L. Van Etten, Dwight E. Burbank, Leslie C. Lane and Anne K. Vidaver. Journal of Virology.
5927. Stray Voltages in a Swine Farrowing Unit - A Case Study. L. E. Stetson, A. D. Beccard and J. A. DeShazer. Trans. American Society of Agricultural Engineers.
5928. Modification of Soybean Plant Architecture with Stem Growth Habit and Maturity Genes. R. C. Hartung, J. E. Specht and J. H. Williams. Crop Science.
5929. Agronomic Performance of Selected Soybean Genetic Morphological Variants in Irrigation Culture with Two Row Spacings. R. C. Hartung, J. E. Specht and J. H. Williams. Crop Science.
5930. Analysis of Curvilinear Selection Response. G. L. Bennett. Biometrics.
5931. Cooling Device for Broken-Out Eggs. Russel K. Free and Earl W. Gleaves. Poultry Science Journal.
5932. Nutritional Impact of Congregate Meals Programs. Sally Van Zandt and Hazel Fox. Journal of the American Dietetic Association.
5933. A Marking and Release Procedure for Estimating Population Sizes of Adult Stable Flies. I. L. Berry, P. J. Scholl and J. I. Shugart. Environmental Entomology.
5934. Effect of Copulation Time on Spermatozoan Transfer of *Diabrotica virgifera* (Coleoptera: Chrysomelidae). Albert C. Lew and Harold J. Ball. Annals of the Entomological Society of America.
5935. Effects of Water and Nitrogen Management on Nitrate Leaching Loss from Sands. Darrell G. Watts and Derrel L. Martin. Transactions of the ASAE.
5936. Feeding Practices and Nutritional Intake of Infants in Nebraska. Hazel Fox and Joyce Peterson. Journal of American Dietetic Association.
5937. The Effect of Air Quality on Respiratory Infections in Pigs Reared in Confinement. N. R. Underdahl, M. B. Rhodes, C. R. Mahrt and D. D. Schultz. International Pig Society.
5938. A Practical Method of Obtaining Gnotobiotic Piglets. Alex Hogg and Norman R. Underdahl. International Pig Veterinary Society.
5939. Seasonal and Diurnal Variation in the CO₂ Flux and CO₂-Water Flux Ratio of Alfalfa. Dennis Baldocchi, Shashi B. Verma and Norman J. Rosenberg. Agricultural Meteorology.
5940. Heterosis, Additive Maternal and Additive Direct Effects in Red Poll and Hereford Cattle. K. E. Gregory, D. D. Lunstra, L. V. Cundiff, R. M. Koch and J. D. Crouse. Journal of Animal Science.

(over)

Journal Abstracts - Submitted for Publication (contact authors for more information)

- 80-1401. Self- and Cross-Fertility in Alfalfa Populations Before and After Selection for Pest Resistance. J. A. Rodriguez and W. R. Kehr. Proceedings 27th National Alfalfa Improvement Conference, July 8-10, 1980, Madison, Wisconsin.
- 80-1402. Field Selection for Phytophthora Resistance in Aphid Resistant Alfalfa Populations. W. R. Kehr, D. K. Barnes, F. I. Frosheiser and G. R. Manglitz. Proceedings, 27th National Alfalfa Improvement Conference, July 8-10, 1980, Madison, Wisconsin.
- 80-1403. Perennial Forage Grass Breeding USDA-SEA-AR and the University of Nebraska. K. P. Vogel, H. J. Gorz and F. A. Haskins. Proceedings, 26th Grass Breeders Work Planning Conference.
- 80-1404. Increased Aflatoxin Production by *Aspergillus parasiticus* Under Conditions of Cycling Temperatures. K. Y. Park and L. B. Bullerman. 40th Annual Meeting of the Institute of Food Technologists, New Orleans, LA, June 8-11, 1980.
- 80-1405. Timeliness Analysis and Machine Sizing for a Specific Situation. Kenneth Von Bargaen. 1980 Summer Meeting ASAE.
- 80-1406. Estimated Response to Selection for Growth and Muscle Score Over Fifteen Years in Three Lines of Hereford Cattle. D. S. Buchanan, M. K. Nielsen, R. M. Koch and L. V. Cundiff. Proceedings, 72nd Annual Meeting American Society of Animal Science.
- 80-1407. Linear Programming Applied to a Machinery Management and Crop Production Situation. Kenneth Von Bargaen. 1980 Summer Meeting ASAE.
- 80-1408. Physiological Age-Grading of Female Stable Flies, *Stomoxys calcitrans* (L.). Philip J. Scholl. 24th Annual Livestock Workshop, July 7-10, 1980, Daytona Beach, Florida, Section 1 (Flies, Biology and Control).
- 80-1409. Effect of Moisture Content of Batter and Mixing Time on Puffing Characteristics of Extruded Egg Products. G. W. Froning. Poultry Science Journal.
- 80-1410. The Effect of Short-Term Tumbling and Salt Injection on the Quality of Turkey Breast Muscle. G. W. Froning and A. S. Babji. Poultry Science Journal.
- 80-1411. Field Evaluation of Calibration Accuracy for Pesticide Application Equipment. Allen R. Rider, Elbert Dickey, Robert Pharris, Pat Lee, Paul Jasa, Rollin Schnieder and Emery Nelson. 1980 Summer Meeting ASAE.
- 80-1412. Sensible Heat Advection, Evapotranspiration and Turbulent Transfer Over Vegetated Surfaces. Shashi B. Verma and Norman J. Rosenberg. International Conference on Energy and Environment, Manila, Philippines, Jan. 5-9, 1981.
- 80-1413. Differential Responses of Sorghum Genotypes to Aluminum. P. R. Furlani, R. B. Clark and W. M. Ross. American Society of Agronomy.